

BETEL: ITS PREVALENCE, CHARACTERISTICS, AND CULTURE, BASED ON EXAMPLES FROM INDONESIA, TAIWAN, AND INDIA

BETEL

Betel is the fourth, after nicotine, alcohol and caffeine, the most popular psychoactive substance in the world,³⁷ which is not particularly shocking when we consider the fact that the habit of chewing betel is observed among residents of India, Pakistan, Bangladesh, Sri Lanka, Nepal, Burma, Thailand, Cambodia, Vietnam, Laos, Taiwan, China, Malaysia, Indonesia, the Philippines, Papua New Guinea and the islands of the western Pacific, and others. Additionally, with migrants, betel reached the UK, South Africa, and Australia from Asia.

Despite the spread of betel quid chewing, this psychoactive substance has hardly been touched on by scholars who are outside the circle of dentists and cancer specialists. Therefore, the confusion starts with the labelling. Betel nut is a name of neither betel nor nut. Betel nut and areca nut refer to the fruit of areca palm (*Areca catechu*). The fruit is mixed with various ingredients to make up a betel quid. There are many different ways of preparing this formulation. The most widely used additions are: the leaf of *Piper betle*, commonly called the betel leaf and slaked lime (calcium hydroxide), which can be obtained from corals, shells, and lime stones.

³⁷ M. Marshall, *An Overview of Drugs in Oceania*, [in:] L. Lindstrom (ed.), *Drugs in Western Pacific Societies: Relations of Substance: ASAO Monograph No. 11*, Boston 1987, p. 13; C. Pankaj, *Areca Nut or Betel Nut Control is Mandatory if India Wants to Reduce the Burden of Cancer Especially Cancer of the Oral Cavity*, 'International Journal of Head and Neck Surgery', 2010, January–April 2010; 1:1, p. 28; World Health Organization International Agency for Research on Cancer, *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: Volume 85 Betel-quid and Areca-nut Chewing and Some Areca-nut-derived Nitrosamines*, Lyon 2004, p. 33.

Apart from that, a betel quid can contain for example: tobacco, sweeteners, spices (cardamom, cloves), or catechu (an extract of acacia tree).³⁸

Betel quid is an addictive³⁹ psycho-stimulant formulation. The products of *Areca catechu* palm fruit contain several alkaloids that affect the human body. Arecoline is the most important among them, and is present in the highest concentration.⁴⁰ Organic compounds found in betel affect the autonomic nervous system.

‘Both sympathetic and parasympathetic nervous systems appear effected, with modulation of both cholinergic and monoamine transmission. It has a stimulating effect upon the parasympathetic nervous system causing dilation of the pupil, a hyperthermic effect on skin temperature, as well as an increase in pulse rate and systolic blood pressure’.⁴¹

Betel is used to fight fatigue, improve concentration, relax, experience the feeling of satiety, freshen the breath.⁴² Chewing betel increases the risk of developing precancerous lesions in the oral cavity. This was confirmed by, among others, an international research conducted on a representative sample of 8922 inhabitants of Taiwan, China, Malaysia, Indonesia, Nepal, and Sri Lanka by the Asian Betel-Quid Consortium (ABC).⁴³ The carcinogenic effects of betel use were also described in a World Health Organization International Agency for Research on Cancer report.⁴⁴ The psychoactive substance in question affects the health of the teeth, gums,

³⁸ P. C. Gupta, S. Warnakulasuriya, *Global epidemiology of areca nut usage*, ‘Addiction Biology’, 2002, 7:1, pp. 78–79.

³⁹ A. R. Winstock et al., *A dependency syndrome related to areca nut use: some medical and psychological aspects among areca nut users in the Gujarat community in the UK*, ‘Addiction Biology’, 2000, 5:2, pp. 173–179.

⁴⁰ A. Winstock, *Areca nut-abuse liability, dependence and public health*, ‘Addiction Biology’, 2002, 7:1, p. 137.

⁴¹ Ibidem, p. 135.

⁴² R. Anand et al., *Betel nut chewing and its deleterious effects on oral cavity*, ‘Journal of Cancer Research and Therapeutics’, 2014, 10:3, p. 499; C. Pankaj, op. cit., p. 28.

⁴³ C.-H. Lee et al., *Population Burden of Betel Quid Abuse and Its Relation to Oral Premalignant Disorders in South, Southeast, and East Asia: An Asian Betel-Quid Consortium Study*, ‘American Journal of Public Health’, 2012, 102:3, pp. e17–e24.

⁴⁴ World Health Organization International Agency for Research on Cancer, op. cit.

and oral mucosa. Chewing areca nut stimulates the production of intensely red saliva and regular use stains the mouth permanently.⁴⁵ It was not confirmed unequivocally that betel weakens and abrades the teeth.⁴⁶ It has been shown, however, that the incidence of dental caries is lower in those residents of South-East Asia who chew *Areca catechu* palm fruit than in those who do not have this habit.⁴⁷



Photo 1. Areca nut.

In the following parts of the paper, I will discuss the topic of the betel-chewing culture in three contexts – in the cases of Indonesia, Taiwan and India. These descriptions will provide an introduction to the subject only.

⁴⁵ R. Anand et al., op. cit., p. 500.

⁴⁶ Ibidem, p. 499.

⁴⁷ Ibidem, p. 500.

It is impossible to avoid simplifications while characterising vast, highly diverse ethnically, linguistically, and culturally populations.

INDONESIA

The Indonesians combine the fruit of *Areca catechu* palm with betel leaves and slaked lime. This formulation is supplemented with tobacco. A handful of tobacco is inserted into the mouth and left there for a moment to clean the mouth.⁴⁸ I had an occasion to observe such a classic way of using betel during my field research in Bayan on the island of Lombok (Photo 1, Photo 2, Photo 3). This psychoactive substance is popular in the villages of Bayan; breastfeeding women who chewed betel (Photo 4) caught my attention.



Photo 2. Leaf of the *Piper betle*.

All components of the betel quid are readily available on the islands of Indonesia. The *Areca catechu* palm is thought to originally come from the

⁴⁸ J. J. Pindborg et al., *Global aspects of tobacco use and its implications for oral health*, [in:] P. C. Gupta, J. E. Hamner, P. R. Murti (eds), *Control of Tobacco-related Cancers and Other Diseases: Proceedings of an International Symposium, January 15–19, 1990, TIFR, Bombay*, Bombay, Delhi, Calcutta, Madras 1992, p. 21.

Malay Archipelago, which is supported by botanical⁴⁹ and linguistic⁵⁰ studies. In the past, for the people of today's Indonesia, betel was an important accessory of social interaction and religious rituals. It was offered to guests, used during courtship and weddings. An association between the nuts and pairing people can be seen in the language; in Malaysian and Indonesian, the fruit is called *pinang*, the verb *meminang* means 'proposing', 'wooing', and the noun *pinang* stands for 'engagement'.⁵¹



Photo 3. A betel box, Bayan.

The research conducted by the ABC shows that 12% of men and 46.8% of women in Indonesia have the habit of chewing betel (data from the years 2009–2010).⁵² Where does the disproportion between men and women come from? It is all because of cigarettes; according to Anthony Reid, 'cigarette smoking has almost completely replaced the chewing of betel

⁴⁹ C. D. Heatubun et al., *A monograph of the betel nut palms (Areca: Arecaceae) of East Malesia*, 'Botanical Journal of the Linnean Society', 2012, 168:2, p. 164.

⁵⁰ A. Reid, *From Betel-Chewing to Tobacco-Smoking in Indonesia*, 'The Journal of Asian Studies', 1985, 44:3, p. 529.

⁵¹ Ibidem, p. 531.

⁵² Lee et al., op. cit., p. e20.

among male Indonesians during the past century'.⁵³ Cigarettes were suitable to substitute betel, because these two drugs perform a similar function – they put the user in the right mood for social interaction.⁵⁴ This transition happened very quickly and clearly in south Sulawesi, where 'virtually everybody chewed betel in 1900, and virtually nobody did so in 1950'.⁵⁵

Cigarettes were and still are seen in Indonesia as a typically masculine stimulant, though the situation is changing and the tobacco industry is slowly starting to notice women. In 2004, 4.5% of females and more than 63% of males smoked cigarettes.⁵⁶ Due to the prevailing, particularly in rural areas, belief that smoking does not suit women, they chew pieces of areca nuts with betel leaves and a pinch of lime, and then they clean the mouth with tobacco.

TAIWAN

In Taiwan, betel chewing is much more popular among men – 10.7% of them do it regularly, while only 2.5% of women use this substance (data from the years 2009–2010).⁵⁷ The Taiwanese betel culture varies according to the ethnic background in question. According to a study conducted in Kaohsiung, the natives wrapped fresh *Areca catechu* fruit in *Piper betle* leaves, while the Chinese chewed cut in half fruit with a paste containing lime smeared inside.⁵⁸

⁵³ A. Reid, op. cit., p. 529.

⁵⁴ Ibidem, p. 532.

⁵⁵ Ibidem, p. 538.

⁵⁶ S. Baber et al., *Tobacco Economics in Indonesia*, Paris 2008, p. 62.

⁵⁷ C.-H. Lee et al., op. cit., p. e20.

⁵⁸ Y.-C. Ko, T.-A. Chiang, S.-J. Chang, S.-F. Hsieh, *Prevalence of betel quid chewing habit in Taiwan and related sociodemographic factors*, 'Journal of Oral Pathology & Medicine', 1992, 21:6, pp. 261–264.



Photo 4. Women chewing betel quid, Bayan.

Christian A. Anderson's doctoral dissertation concerns betel nut chewing culture in Taiwan and Hainan.⁵⁹ The researcher compared the traditional and contemporary customs associated with this stimulant. In Taiwan, in the case of the former, betel is an object of ritual exchange during courtship and weddings, it is also used in traditional medicine. The contemporary betel use culture began to grow in the 1970s and 1980s, due to socio-economic changes, globalization, industrialization, and urbanization. In the places where betel chewing is popular with men, drivers, workers, it is sold by 'betel nut beauties' (*binlang xishi*),

'The name "betel nut beauty" (*binlang xishi*) refers to a legendary historical figure named *Xi Shi*, renowned as one of the Four Beauties of Ancient China [...]. [...] Traditionally in Taiwan any beautiful women working in the market would be called by the name of whatever they were selling with the added title "*xishi*" such as "*tofu xishi*" Thus, when young women began selling betel nut in Taiwan, they were called "*xishi*".'⁶⁰

Scantly clad young women work in glass stands that can be found along the roads and highways or at night markets (Photo 5). These stands are conspicuous due to neon bright light. Betel, drinks, and cigarettes are sold inside and outside. Betel nut girls found their way into popular culture; they became main characters in films that were screened in cinemas in Europe, *Help me Eros* (*Bang bang wo ai shen* 2007) and *Betelnut Beauty* (*Ai ni ai wo* 2001). The phenomenon raises many controversies related to the exploitation and objectification of women, morality, dress in public places. Such a marketing strategy has proved successful. In the early 1990s, the betel industry become very profitable.⁶¹ Although

⁵⁹ C. A. Anderson, *Betel Nut Chewing Culture: The Social and Symbolic Life of an Indigenous Commodity in Taiwan and Hainan* [doctoral dissertation], University of Southern California 2007.

⁶⁰ Ibidem, p. 185.

⁶¹ Ibidem, p. 177.

the areca nut production is no longer growing, still its cultivation area is large, second only to rice fields.⁶²

INDIA

In India, there is a large variety of products based on the *Areca catechu* palm fruit. I will describe two of them – *gutkha* and *pan masala*. These industrially produced formulations have become in recent years a subject of discussion among the lawmakers and journalists.



Photo 5. Betel nut beauty shop, Taoyuan [from:] C. A. Anderson, *Betel Nut Chewing Culture: The Social and Symbolic Life of an Indigenous Commodity in Taiwan and Hainan* [doctoral dissertation], University of Southern California 2007, p. 184.

Gutkha consists of: areca nut, tobacco, calcium hydroxide, catechu, sweeteners, and flavour enhancers, while *pan masala* does not contain tobacco.⁶³ These products are packaged in small coloured boxes and advertised in the media. In 2003, the anti-tobacco law was tightened in India: selling

⁶² *Yearly Report of Taiwan's Agriculture 2013, Agricultural Production*, eng.coa.gov.tw/list.php?catid=2501664 [12.01.2015].

⁶³ P. C. Gupta, C. S. Ray, *Epidemiology of Betel Quid Usage*, 'Annals Academy of Medicine', 2004, 33:4, p. 33.

tobacco products to minors and near school buildings was banned, together with all forms of advertising the products.⁶⁴ Manufacturers bypassed the latter by selling both (tobacco containing) *guthka*, as well as (tobacco free) *pan masala* under the same brand names and in similar packaging.⁶⁵ The industry associated with *guthka* and *pan masala* was developing rapidly; the products had many buyers, including children and adolescents.⁶⁶ The popularity among children and adolescents as well as the negative impact on health of the users alerted the authorities. Using *guthka* and *pan masala* was linked to an increased risk of oral submucous fibrosis (OSF). This precancerous condition was first described in the 1950s. Still in the 1960s its incidence was very low and it was thought to be due to consuming hot peppers.⁶⁷ Today, in India it is said to be an epidemic.⁶⁸

At the beginning of the twentieth century, in some states of India laws banning production, sale, and possession of *guthka* began to appear. The first such law was introduced in 2001 in Tamil Nadu.⁶⁹ In Maharashtra, manufacturing, selling, and using of both *guthka* and *pan masala* is prohibited since 2012.⁷⁰ The legal situation is far from stable, bans are imposed by state legislation for a year and, if not renewed after that time,

⁶⁴ *The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act*, 2003, No 34 of 2003, who.int/fctc/reporting/Annexthreeindia.pdf [12.01.2015], sections 5–6.

⁶⁵ P. C. Gupta, C. S. Ray, op. cit., p. 33.

⁶⁶ S. Kaur, S. Singh, *Cause for Concern in Punjab Villages: High Levels of Guthka Intake among Students*, 2002; G. Hans, *Prevention of Cancer in Youth in Particular Reference to Intake of Paan Masala and Guthka*, Mumbai 1998 [as cited in:] C. S. Ray, P. Gupta, J. de Beyer, *Research on Tobacco in India, Including Betel Quid and Areca Nut: An Annotated Bibliography on Use, Health Effects, and Control Efforts*, Washington 2003.

⁶⁷ P. C. Gupta, C. S. Ray, op. cit., p. 34.

⁶⁸ P. C. Gupta et al., *Oral submucous fibrosis in India: a new epidemic?*, 'The National Medical Journal of India', 1998, 11:3, pp. 113–116; P. C. Gupta, C. S. Ray, op. cit., pp. 33–34.

⁶⁹ Ibidem, p. 34.

⁷⁰ G. G. Dhumal, P. C. Gupta, *Assessment of Gutka Ban in Maharashtra: Findings from a Focus Group Discussion*, 'International Journal of Head and Neck Surgery', 2013, 4:3, p.115.

they expire.⁷¹ Furthermore, such bans are often broken, what has been described by researchers from Mumbai.⁷²

SUMMARY

The custom of chewing betel is widespread among the 600 million people who live in South Asia, the Indochinese Peninsula, Malay Archipelago, and islands of the western Pacific. The very name of this psychoactive substance raises misunderstandings. Betel and its impact on the appearance of precancerous lesions in the oral cavity has been the subject of medical research. The literature on preparation, distribution, symbolism, and diverse cultures of taking betel is scarce. These topics could become a basis for many interesting anthropological, literary, and historical research.

I described some elements of the betel use cultures specific to Indonesia, Taiwan, and India. In Indonesia, women use betel much more often than men do since the latter have replaced it with cigarette smoking, while in Taiwan the stimulant is more popular among the men. Therefore specific and controversial marketing strategies were developed. Betel nut girls, scantily clad, sell it in transparent, lit kiosks. In India, the mass-produced and advertised in the media products – *pan masala* without tobacco and *guthka* containing it – have gained popularity in the recent decades. At the beginning of the twenty-first century, bans of production, sale, and consumption of *guthka* began to appear in states of India, in Maharashtra concerning also *pan masala*.

⁷¹ Ibidem, p. 115.

⁷² S. Pimple et al., *Compliance to Gutka ban and other provisions of COTPA in Mumbai*, 'Indian Journal of Cancer', 2014, 51:1, pp. s60–s66.

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